

FARKAS, Ferenc

The White cathode follower amplifier. Radiotechnika 14 no.1:
10-11 Ja '64.

CA FARKAS, Fr.

117

Antihistamine drugs and movements of the villi. G. Lúdvány, Fr. Farkas, and A. Incze (Univ. Budapest). *Arch. intern. pharmacodynamie* 83, 553-5 (1960).—In the anesthetized dog, antergan, antistine, and theophylline, in concns. of 1:100,000, increase the movements of the villi but have no effect on tone and capillaries. In 1:10,000 diln. the drugs increase the movement further and also increase the tone. All the drugs antagonize the effect of histamine. M. L. C. Barabain

FARKAS, F. 1951

(Pathophysiol. Inst. U. of Budapest)

"Method for Determination of the Length of Isometric and Isotonic Contraction of the Ventricle."

Z. Kreislforsch. 1951 40/19-20(585-592)

Abst: Exc. Med. 11, Vol. 5, No. 7, p. 811

UNOHVARY, L.;SCHULTHEISZ, E. FARKAS, F.

Procedure for the determination of hemoglobin. Orv. hetil. 93 no.
17:512-513 27 Apr 1952. (CIML 23:3)

1. Doctors except for Farkas. 2. Fehervari-at Metropolitan Con-
sultation Clinic (Director -- Dr. Robert Kiralyhegyi).

FARKAS, G. - Vol. 5, no. 4, Apr. 1955. - Kozlekedestudományi Szemle.

Survey of the development of Soviet rolling stock and some domestic aspects of this question. p. 145.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

FARKAS, G.

Possibilities for increasing the capacity of streetcar lines. p. 460.
Vol 5, no. 12, Dec. 1955. KOZLEKEDESTUDOMANYI SZEMLE. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

PAPPAS, G.

POSSIBILITIES OF APPLYING INFRARED HEAT TRANSMISSION IN THE FIELD OF TRANSPORTATION
AND IN HIS REPAIR INDUSTRY.

P 83 (KOZLEKEDESTUDOMANYI SZEMELE) BUDAPEST, HUNGARY VOL 7 NO 1/3 JAN/MAR 1957

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (AIEI) VOL. 6 NO 11 NOVEMBER 1957

FARKAS, G.

Changes in the requirements of city transportation. p. 365.
(Kozlekedesi Kozlony, Vol. 13, no. 20, May 1957. Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 9, Sept. 1957. Uncl.

FARKAS, G.

TECHNOLOGY

KOZLEKEDESTUDOMANYI SZEMLE. (Kozlekedes- es Kozlekedesepitestudomanyi
Egyesulet) Budapest.

FARKAS, G. Remarks on the article by Rudolf Nagy "Cause of the Deterioration
of Electric-Railroad Lines Equipped with Phoenix Rails." p. 357.

Vol. 8, no. 7/8, July/Aug. 1958.

Monthly List of East European Accession (EEAI) LC Vol. 8, No. 3
March 1959, Unclass.

FARKAS, G,

"Viewpoints on the development of the traction-power supply of our electric streetcar transportation system." p. 114.

ELEKTROTECHNIKA. (Magyar Elektrotechnikai Egyesulet). Budapest, Hungary, Vol. 52, No. 3, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

FARKAS, Gabor

Viewpoints on the development of the traction power supplies
for our urban electric streetcar transportation system.
Elektrotechnika 52 no.3:114-126 '59.

1. Tudomanyos munkatars, Vasuti Tudomanyos Kutato
Intezet.

FARKAS, Gabor

Role of endogenous and exogenous factors in the control of the protein metabolism of plants. Biol oszt kozl MTA 6 no.3/4:269-284 '63.

1. Magyar Tudományos Akademia Novenzeletti Kutatocsoportja,
Alsogod.

FARKAS, Gabor

Physiological foundation for the resistance of plants to diseases.
Elovilag 8 no.1s42-45 Ja-F '63.

DEZSI, Laszlo; FARKAS, Gabor

Effect of kinetin on the glycolic acid oxidase system. Botan
kozl 51 no.2/3:119-125 Ag '64. (MIRA 17:10)

1. Research Group on Plant Physiology, Hungarian Academy of
Sciences, Alsogod.

AUTHOR: Krasznai, I.; Farkas, G.; Gyertyanffy, G
 TITLE: Large capacity geometry-independent scintillation counter
 SOURCE: Energia es Atomtechnika, no. 2-3, 1965, 114-116
 TOPIC TAGS: radiation counter, radiation dosimeter, scintillation counter
 ABSTRACT: The authors report on a large capacity, geometry-independent radiation counter operating with a liquid scintillator and, in addition to the measurements relevant to the technical data and geometry-independence of the device, discuss the field of possible applications. In addition to the laboratory work of the general purpose isotope where the problem arises of comparing the activities of inhomogeneous radiation sources of different capacity - they underline its importance in the field of medical-biological applications. The scintillation counter described here may be considered as geometry-independent up to an accuracy of 10%. By using it, it becomes possible to make individual diagnostic investigations with a substantially smaller quantity of isotope which favorably reduces the radiation dose to the patient. The device can be used in experimental work to radiation count the entire body of small animals. Orig. art. has: 1 table and 4 figures.

H/0008/65/000/02-/0114/0116
 43
 39
 B
 79.55

card 1/2

ACC NR: AP5008461

ASSOCIATION: I sz. Belklinika - III sz. Belklinika, Budapest (Internal Medicine
Clinic Number I - Internal Medicine Clinic Number III)

SUBMITTED: 00

ENCL: 00

SUB CODE: 18

NO REF SOV: 000

OTHER: 004

Card 2/2 1/10

L 29631-66 EWP(1) IJP(c) GG/BB

SOURCE CODE: RU/0011/65/009/005/0201/0202

ACC NR: AP6020126

AUTHOR: Boou, M. (Engineer); Farkas, G. (Engineer); Rosman, M. (Engineer)

45
B

ORG: Computer Institute, Cluj (Institutul de calcul)

TITLE: Automatic control device of the DACICC-1 machine

SOURCE: Automatica si electronica, v. 9, no. 5, 1965, 201-202

TOPIC TAGS: automatic control equipment, digital computer

ABSTRACT: A brief description of the central part of the digital electronic computer built by the Cluj Computer Institute. The computer is of the serial type, with fixed decimal point and addresses, and can perform up to 2,000 operations per second. Orig. art. has: 1 figure. [Based on authors' Eng. abstr.] [JPRS]

SUB CODE: 13, 09 / SUBM DATE: none

UDC: 681.14-423.8

Card 1/1 CC

L 29633-66 ENP(1) IJP(c) GG/BB

SOURCE CODE: RU/0011/65/009/005/0204/0207

ACC NR: AP6020128

AUTHOR: Farkas, Gh. (Engineer)

ORG: Computer Institute, Cluj (Institutul de calcul)

TITLE: Ferrite ring memory of the DACICC-1 machine

SOURCE: ^{16c}Automatica si electronica, v. 9, no. 5, 1965, 204-207 ^{16c}

TOPIC TAGS: ferrite core memory, computer

ABSTRACT: The author traces the construction of the ferrite ring memory for the computer. The unit is of the current coincidence type, and has 1,024 cells and an operating cycle of 17 microseconds. The author thanks Engineer M. Bocu and Engineer Ch. Petrescu for participating in the constructions of the memory. Orig. art. has: 7 figures. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 09 / SUHM DATE: none / OTH REF: 001 / SOV REF: 001

Cord 1/1 CC

UDC: 681.24-501.222:621.318.2

Plant Physiology

HUNGARY

FARKAS, Gabor, academician; [affiliation not given]

"Enzymological Aspects of Plant Diseases and the Resistance of Plants Against Disease"

Budapest, A Magyar Tudományos Akademia Biologiai Tudományok Osztályának Közleményei, Vol VIII, No 2, 1965, pages 223-238

Abstract: The article was the acceptance lecture of the author at his election to the Academy. It is a summary report on the biological research activities in plant physiology, during the past 15 years. It is stated that, when attacked by a pathogen, the plant will develop characteristic active, defensive type responses similar to those of animals and human organisms. The response might consist of the production of an antimicrobial (antiviral) protein or it may be the synthesis, repression or liberation into active form by other mechanisms of a protein with enzymatic properties which may play an important role in the regulation of metabolic pathways and may be of a basically manifold character at the same time. Such factors include the "aromatization" of the metabolism in the infected plants which leads to the synthesis of phenolic compounds and other antimicrobial aromatics. The "activation" of oxidative enzymes must also be mentioned. Other metabolic-physiological factors in the harmonious host-parasite relationship cannot be left out either, as e.g. the metabolism of vitamins. The cooperation

1/2

HUNGARY

Budapest, A Magyar Tudományos Akademia Biologiai Tudományok Osztályának Közleményei, Vol VIII, No 2, 1965, pages 223-238.

between the metabolic systems of host and parasite (susceptibility) or dissonance between them (resistance) will undoubtedly be best approached by research involving nucleic acid and protein (enzyme) metabolism. 4 Eastern European, 48 Western references.

SOLYMOSY, Ferenc; FARKAS, Gabor

Biochemical mechanism of localized, acquired resistance to virus infection in tobacco tissues. Botan kozl 50 no.1: 13-20 My '63.

1. Növényvédelmi Kutató Intézet, Budapest, II., Herman Otto ut 15. (for Solymosy). 2. Magyar Tudományos Akadémia Növényeletani Kutató Csoportja, Alsógöd; "Botanikai Közlemények" szerkesztő bizottsági tagja (for Farkas).

FULOP, Tibor, dr.; KAISER, Eva, dr.; FARKAS, Gabor, dr.

Treatment of hypersarrhythmia associated with flexor spasm
with ACTH and prednisolone. Orv. hetil. 105 no.11:497-500
15 Mr.'64.

✓ 1. Pesci Orvostudományi Egyetem, Gyermekklinika (igazgató:
Kerpel-Fronius Odon, dr.)

*

EXCERPTA MEDICA Sec. 7 Vol. 9/6 June 55

FARKAS G.

6. GASTROINTESTINAL SYSTEM

1225. FARKAS G. Árpád Hosp., Budapest. * A clinical contribution to enteritis due to E. coli (Hungarian text) GYERMEKGYÓGYÁSZAT (Budapest) 1954, 5/5 (156-159) Tables 3

205 infants suffering from enteritis due to E. coli O 111 and O 55 were examined as to ESR. This was found to be below 10 mm. for the first hour in most cases. The sign is recommended for rapid differentiation between infection with Escherichia and other intestinal pathogenic agents, especially Shigella.

Véghelyi - Budapest ;

EXCERPTA MEDICA Sec 17 Vol. 2/9 Pub. Health Sept 56

2950. FARKAS G. and SZÉCZEY G. A Fővárosi Árpád Kórház Csecsemő o.
anak és Fővárosi IV. ker. Közkórház. Lab. Közleménye. *A torok bak-
teriológiai vizsgálatának jelentősége coli dyspepsia járványban. The
significance of the throat bacteriological examination
in coli-dyspepsia epidemics ORV. HETIL. 1955, 96/21 (581-5)
Graphs 2

One hundred infants with coli dyspepsia and 100 infants in contact with them b-
with negative stool and without enteritis were bacteriologically examined for
throat. Out of the 100 infants with coli dyspepsia 58 showed recurrence, 74.1%
their throats were positive for the specific coli strain, while out of the 42 n-
recurring cases 9.5% showed specific coli strains in their throats, 3% of the
controls were positive for coli dyspepsia of the throat. The significance of the a-
genic infection during hospital epidemics was stressed.

Molnár - Budapest (IV, 1)

FARKAS, GABRIELLA

KALLO, A., dr.; FARKAS, Gy., dr.; MIKLOS, Gy., dr.; HODI, L., dr.;
SZIJARTO, L., dr.

Relapsing modular panniculitis with co-existing aortic arch syndrome.
Orv.hetil. 102 no.33:1550-1554 13 Ag '61.

1. Budapesti Janos Korhaz, Korbontani es Korszovettani Osztaly es
IV. Belosztaly.

(PANNICULITIS compl) (AORTA abnorm)

FARKAS, Gyozo; JANOSSY, Lajos; NARAY, Zsolt; VARGA, Peter

Experimental tests for determining the correlation of coherent light beams. Koz fiz kozl MTA 11 no.2:89-97 '63.

1. "A Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezetenek Kozlemenyei" felelos koadoja (for Janossy).
2. "A Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezetenek Kozlemenyei" szerkeszto bizottsagi tagja (for Naray).

FARKAS, Gy.

Methods of saving coal by means of gas generators; also, remarks by K. Jermendy.

p. 149.

EPITOÁNYAG, Budapest, Vol. 7, no. 4, Apr. 1955.

SO: Monthly List of East European Accessions, (SEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

FARKAS, GY.

Control and instruments of brown coal generators. (To be contd)
P. 157 MAGYAR ENERGIAGAZDASAG Budapest, Vol. 9, no. 4, Apr.
1956

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

FARKAS, G.

Some words on drawing off heating oil.

p. 55 (Energia es Atomtechnika) Vol. 10, no. 1, Apr. 1957, Budapest, Hungary

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

PARKAS, GY.; WIGG, I.

"On the determination of the emission capacity of radiating holes." p. 37.

MAGYAR FIZIKAI FOLYOIRAT. (Magyar Tudomanyos Akademia). Budapest, Hungary,
Vol. 7, No. 1, 1959.

Monthly list of East European Accessions (EIAI), IC, Vol. 8, No. 8, August
1959.
Uncla.

FARKAS, Gyorgy, dr.; KOSZEGVARY, Sandor, dr.

Multiple subcutaneous abscess caused by potassium iodide (abscessing panniculitis due to potassium iodide). Orv. hetil. 102 no.40:1896-1898 10 '61.

1. Janos Korhaz-Rendelointezet, IV Belosztaly, Budapest.

(IODIDES toxicol) (PANNICULITIS etiol)
(ABSCESS etiol)

FARKAS, Gyorgy, dr.; HODY, Laszlo, dr.

Differential diagnosis of pulse abnormalities in the upper part of the body. Orv. hetil. 103 no. 31:1443-1448 5 Ag '62.

1. Budapesti Tanacs Janos-Korhaz-Rendelointezet, IV. Belosztaly.
(CARDIOVASCULAR DISEASES diag.) (AORTA dis) (PULSE)

FARKAS, Gyorgy, foovos

"New achievements in endocrinology" by Endre Goth. Reviewed by
Gyorgy Farkas. Magy tud 71 no. 4:272 Ap '64.

1. Janos Hospital, Budapest.

7

C. A. FARKAS, Gy.

metals for the printing industry. Gyozo Farkas, Hung
134,256, Mar. 10, 1918. Generally 0.7-1.0% Cd is in-
corporated with the usual metals, e.g. (1) 0.5% Cd, 12.0%
Sb, and 87.5% Pb, or (2) 3% Cd, 12% Sb, and 85% Pb.
1. Finally

FARKAS, Gyozo

254/89, 631.383.37
 Reduction of the dark current of photomultipliers having large transparent cathodes. Gy. FARKAS, F. VARGA, A. MAYER. *Fizikai Közlemények Magyar Tudományos Akadémia Kísérleti Fizika Intézetének Közleményei* (Proceedings of the Central Research Institute for Physics of the Hungarian Academy of Sciences), Vol. 7, 1964, No. 4, pp. 244-246, 8 figs.

High-amplification photomultipliers usually have transparent photocathodes of large area and their microoptical application (e. g. measurement of very small light currents) is hindered by the high noise level. The dark current can be reduced by a suitable preparation of the photomultiplier (excluding the disturbing external electrostatic fields, covering the glass bulb with a conductor layer). A further decrease of the dark current is achieved by reducing the effective diameter of the photocathode with a magnetic lens. In this case only the illuminated part of the photocathode is sensitive and the electrons emitted by this small area can reach the multiplying system, but the dark current electrons emitted by the dull area return to the cathode. By these methods the number of dark current pulses was reduced to $3 \cdot 10^4$ pulses per sec. without any significant decrease in sensitivity.

Patlak, Gy.

"Rapid Gear-cutting Method", P. 512, (GB, Vol. 6, No. 11, November 1954, Budapest, Hungary)

SC: Monthly List of East European Accessions (HFM), 10, Vol. 2, No. 3, March 1955, Uncl.

FARKAS, Gyula

Physicogeographical regions of Hungary. Borsod szemle 5
no.5:2 of cover '61.

FARKAS, Gyula

"Aggtelek and its vicinity; the Northern Borsod karst region"
by [Dr] Laszlo Jakucs. Reviewed by Gyula Farkas. Borsod
szemle 6 no.2:109 '62.

1. MSZBT.

FARKAS, Gyula

"Visual aids in teaching geography" by [Dr] Karoly Udvarhelyi.
Reviewed by Gyula Farkas. Borsod szemle 6 no.2:111 '62.

1. MSZBT.

FARKAS, Gyula

National contest for preparing visual aid in geography. Borsod
szemle 7 no.1:103 '63.

BOTTYAN, Olga; DEZSO, Gyula; EIBEN, Otto; FARKAS, Gyula;
RAJKAI, Tibor; THOMA, Andor; VELI, Gyorgy

Observations on the beginning of the menstruation in
Hungary. Elovilag 9 no.2:16-18 Mr-Apr '64.

FARKAS, G.L.

②

✓ Breeding drought-resistant plant varieties. G. L. Farkas and T. Stajdathy (*Nepenthes*, 1952, 1, 5-20).—In tomatoes degree of the xeromorphic structure of the upper leaves is not solely the result of ontogenic development; it depends on the height of leaf insertion and not leaf size. The xeromorphic gradient is more marked under dry than under humid conditions. A gradient also exists for several physiological and chemical factors, e.g., intensity and nature of transpiration, isoelectric point of the cytoplasm proteins, surface charge of the chloroplasts, K : Ca ratio, vitamin C content, and the

synthesis : hydrolysis ratio for invertase activity. The magnitude of changes in the plant metabolism produced by drought is a measure of the adaptability of the plant. A. STORVEN.

~~EÖTVÖS, GÁBOR~~ FARKAS, Gábor

MD
Biology of the formation of anthocyanins. Nándor Gimesi, András Garay, Béla Pozsár, and Gábor Farkas. *Bötvös (H. Univ., Budapest). Agrokémia és Talajtan* 1, 800-806 (1982).—No anthocyan was formed in seedlings of *Amaranthus caudatus* when kept in darkness or placed in sunlight only after 3-4 days. Seedlings first germinated in darkness and placed in sunlight after 42 hrs. developed as much anthocyan as when kept in sunlight from the start of germination. The light-sensitive stage lasted in July 72 hrs. whereas in March the seedlings lost their light sensitivity at an age of 48 hrs. No const. exposure to light is necessary in the sensitive stage. In July, 3-min. exposure was satisfactory for seedlings aged 48 to 61 hrs., whereas 120 min. was needed in seedlings aged 27 or 69 hrs. Besides light, also an inner factor like a special type of metabolism plays a role in the formation of anthocyan. The chem. analysis of the AmOH exts. of seedlings grown in darkness is referred to the reducing effect of the soln. to flavonol. Light presumably affects the conversion flavonolanthocyan by influencing the activity of an enzyme catalyzing this process. This is corroborated by the experience that hot-water exts. are more stable. I. Finally

3

FARKAS, G.L.

of Food and Agriculture
May 1954
Agriculture and Horticulture

(2)
Methods of breeding drought-resistant (plant) varieties. G. L.
Farkas and T. Rajhathy (*Növénytermelés*, 1953, 2, 123-130).
Universal occurrence of physiological-chemical gradients in the
acropetal direction, some of which are sensitive to water relations
in a manner similar to the xeromorphic gradient, is reported. Con-
trary to the data in literature the catalase and peroxidase activity
gradients are not influenced by dryness. A profound effect of water
conditions on gradients of chlorophyll and ascorbic acid content
is observed. S. K. LACHOWICZ

WAGAS, J.I.

(2)

Journal of the Science of
Food and Agriculture
April 1954
Agriculture and Horticulture.

Physiology of winter hardening of barleys infected with loose smut.
Z. Király and G. L. Farkas (*Növénytermelés*, 1953, 2, 130—133).
In a study of the causes of reduced frost-resistance of plants infected
with loose smut the sugar content and gas exchange during winter
hardening, provides further experimental evidence that the increased
sensitivity of infected plants is due to stimulated metabolism, the
host being unable to attain a state of dormancy.

S. K. LACHOWICZ.

Farkas, Gabor L.

✓ Toxicity of sugars to the plant roots. Antagonism of sugars. Gabor L. Farkas (Research Inst. Crop Production, Munkacs, Hungary). *Agrobiologia* 2, 341-34 (1953) (English summary).—This study concerns the poisoning effect of galactose on certain plants. With a concn. of 10^{-4} M of galactose there was proof of poisoning effects after 3 days in the following plants: *Avena sativa*, *Triticum aestivum*, *Hordeum vulgare*, *Zea mays*, *Oryza sativa*, *Brassica hirsuta*, *B. oleracea*, *Nicotiana tabacum*, *Papaver rhoeas*, *P. somniferum*, *Linum usitatissimum*, *Euphorbia myrsinites*, *Taraxacum kok-saghyz*, *Foeniculum vulgare*, *Amaranthus caudatus*, *Hieracium pilosella*, *Helianthus annuus*. On the basis of this proof the general toxicity of galactose to plant roots can be stated. The effect of galactose on the root is manifested by the end of the root turning brown, thick, and hard, and the root stops growing. Glucose, and sugars which can be readily converted to glucose (fructose, sucrose, maltose, cellobiose), show a very strong antagonistic action. The degree of this action depends on the relative concn. The inhibition is competitive. Contrary to other authors F. does not confirm the poisoning effect of xylose, maltose, or fructose. The conversion of galactose to glucose in yeast, and probably in green leaves, too, involves adenosinetriphosphate and the enzymes galactokinase and phosphogalactoisomerase. It appears that the root is not equipped with the necessary enzyme system to make this conversion.

Nella Hellinger

FARKAS, G.

Physiological analysis of damages by black rust on the basis of the examinations of respiratory systems. P. 157.

KOZLEMENYEI, Budapest. Vol. 8, no. 1/2, 1955.

SOURCE: EAL Vol. 5, No. 7, July 1956.

FARKAS - G.L.

✓ Respiration of wheat infected with stem rust and powdery mildew. G. L. Farkas and Z. Király (Inst. Agr. Research, Martonvásár, Hung.) *Physiol. Plantarum* 8, 877-87(1955).
—The respiratory rate of leaf tissue from infected seedlings was considerably higher than that of normal tissue and showed several qual. differences as well. In contrast to healthy tissue, the O uptake of infected leaves was insensitive to malonate and partially sensitive to CN⁻. The presence of a toxin could not be detected. The results substantiate the hypothesis that respiratory changes are taking place in the host tissue and cannot be explained by the additive effects of fungus respiration. Edgar M. Shantz

2

FARFAS, G. L.

① M D ✓ The xeromorphic gradients of some cultivated plants. G. L. Parkus and T. Rajhathy (Hungary). Akad. Wias. Merton 1958, Hung.). *Planta* 45, 535-44 (1958).—It has been shown that the upper leaves of plants show water-sparing characteristics more than the lower, presumably because of the difficulty of supplying them with water. This paper reports this condition in barley, oats, flax, *Glycine hispida*, and tomato, special attention being given to tomato. There is a strict but not linear relation between the size of the epidermal cells and the no. of stomata. The course of the gradients of the physiol. features is independent of the variations in the size of the leaves and is only affected by the height of the point of attachment of the leaves and not by their growth. Under conditions of water deficit the gradient of the xeromorphic characteristics is changed, usually being made more pronounced. Studies of the water content, degree of satn. with water, degree of succulence, chlorophyll content, and ascorbic acid content showed that the amplitude of the variation of these figures from the tip to the base of the plants differs according to the abundance of water. The displacement of the physiol. gradients shows a clear relationship to the degree of satn. with water, which is probably a primary effect of the water supply. The differences in the physiol. and chem. characteristics along the height of the plant, rather than their values for any leaf, show the effect of the relative abundance or deficiency of water. B. L. Green

FARKASH, G. L.

✓ Enzymology of an allopolyploid plant in connection with its resistance to microbes. G. L. Farkash and Z. L. Lurid, *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1956, No. 5, 47-58.

Met — Principally a review with numerous references through 1955. It was shown that wheat plants suffering from rust invasion have a much more active ascorbic acid oxidase than do normal plants. (V. M. Koshly, ed.)

Sci Res Inst. Agriculture "Khozgaysstvo"
Acad. Sci, Ussr, Moscow, Martsynovskiy

FARKAS, G. L.

✓ The metabolic interactions between host and parasite
G. L. Farkas (Hung. Acad. Sci. Martonvasar) 1-
Biol. Acad. Sci. Hung. 7, 415-24 (1957) in English. 4 p.
view with 44 references. You to discuss.

MT

2

Country : Hungary
Category : Plant Physiology. Respiration and Metabolism. I
Abs Jour. : Bot. Zhurn.-Biologiya No. 11, 1958. No.48503
Author : Farkas, G.L.; Konrád, É.; Király, Z.
Institute : Budapest Institute of Plant Protection
Title : The Effect of Light on the Malonate Sensitivity
of Plant Respiration
Orig. Pub.: Physiol plantarum, 1957, 10, No.2, 346-355
Abstract : Etiolated wheat sprouts were exposed to direct
sunlight, a 300 watt incandescent lamp and to
ultra-violet light. The intensity of illumination
was 1.49×10^{-2} watts per cm^2 . The respiration
rate was measured in darkness using a Warburg
apparatus with 0.02 M malonate in a phosphate
buffer (pH 4.5 [7]). Respiration of the etiolated
sprouts was very steady in regard to the malonate.
Card: 1/4
Country : Hungary

Country : Hungary
Category : Plant Physiology. Respiration and Metabolism.

Abs. Jour.: Bot. Zhurn.-Biologiya No. 11, 1956. No. 48503

Author :
Institute :
Title :

Orig. Pub.:

Abstract : Increased dosages of illumination caused a 50-60% rise in the sensitivity of respiration to malonate. There was no direct connection between this heightened effect and the fact that the tissue turned green while chlorophyll was formed, since similar increases have also been observed in experiments with older sprouts which were scarcely able to produce chlorophyll, as well as in root

Card: 2/4

Country : Hungary I
Category : Plant Physiology. Respiration and Metabolism.

Abs Jour. : Ref. Genet.-Biologica No. 11, 1972. No. 48503

Author :
Institute :
Title :

Orig. Pub.:

Abstract : experiments. The influence of illumination on respiration was not diminished when the irradiated sprouts were kept for two or three hours in darkness. Experiments in keeping old plants in darkness which were also very sensitive to malonate confirmed the theory that, once stimulated, this sensitivity is not easily lost. Some findings indicate that the effective part of the spectrum is the ultra-violet end. Distribution

Card: 3/4

Country : Hungary I
Category : Plant Physiology, Respiration and Metabolism.

Abs. Jour.: Ref. Zhur.-Biologiya No. 11, 1958. No. 48503

Author :
Institute :
Title :

Orig. Pub.:

Abstract : paper chromatography showed that the malonate content in the etiolated sprouts does not change after irradiation. The authors hypothesize that light activates the cytochromoxydase-succinoxidase reaction in respiration (which is inhibited by malonate). This study was made at Budapest Inst. of Plant Protection. The bibliography list 20 titles. --A.G. Vereshchagin

Card: 4/4

DEZSI, L.; FARKAS, G.L.

Effect of kinetin on enzymes of glycolic acid metabolism in
cereal leaves. Acta biol. acad. sci. Hung. 14 no.4:325-332
'64.

1. Plant physiology laboratory, Hungarian Academy of Sciences,
Alscgd. (Head: G.L. Farkas).

KRASZNAI, Istvan; FARKAS, Gyorgy; GYERTYANFFY, Geza

Geometrically independent large-volume scintillation counter.
Energia es atom 18 no.2/3:114-116 F-Mr '65.

1. No.1 and No.3 Clinics of Internal Diseases, Budapest.

FARKAS, H.

On the fauna of the springs of Hungary. I. Mts. Dunazug. In English. p.377.
(Magyar Nemzeti Múzeum Természettudományi Múzeum Évkönyve, Vol. 7, 1956,
Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 9, Sept. 1957. Uncl.

FARKAS, H.

On some fresh-water Ostracoda from South America. In German. p. 307

Országos Magyar Természettudományi Múzeum. MAGYAR NEMSETO MUZEUM TERMESZET-
TUDOMANYI MUZEUM EV KONYVE. ANNALES HISTORICO-NATURALES MUSEI NATIONALIS
HUNGARICI. Budapest, Hungary. Vol. 9, 1958

UNCL.

Monthly List of East European Accession (EEAI) LC, Vol. 9, no. 2, Feb. 1960

FABRAS, I.

EXHIBIT 10 - CAPED OPERATOR
THREATS: SEE EXHIBIT 10

FARKAS, I.

2

✓ Some Aspects of the Durability of the Arcs of Electric Arc
Furnaces. I. Farkas. (Kohderati Lapok, 1956, II, (8), 249-
253). Ignoring the present experimental rammed roof lining
and referring to the unmitigated quality of silica bricks in
Hungary the author suggests the use of chrome-magnesite
bricks but in cross arch rather than in concentric construction.

RT
MT

FARKAS, I.; GERENCSEI, A.

Research results and measuring methods in testing milking machines. p.294

JARMUVLEK MEZOGAZDASAGI GEPEK. (Gepipari Tudományos Egyesület)
Budapest, Hungary
Vol. 6, no.10, (Oct.) 1959

Monthly List of East European Accessions (EEAI) IC., Vol. 8, no.12, Dec. 1959
Uncl.

HORNAYI, J., dr.; STEFANICS, J., dr.; FARKAS, I., dr.

Umbilical endometriosis. *Magy. onkol.* 7 no.1:48-51 Mr '63.

1. Budapesti Orvostudományi Egyetem, II. Sebészeti Klinika.
(ENDOMETRIOSIS) (UMBILICUS) (ADENOCARCINOMA)

FARKAS, I. 1948

(Med. Clin. U. of Pecs)

"Methylthiouracil and Aminothiazole in thr Treatment of Hyperthroidism."

Orvosi Hetilap 1948, 89/7(101-106)

Abst: Exc. Med.111, Vol. 111, No. 3. p. 92

CA

14

Determination of the total hardness in waters with potassium stearate. Szilárd Papp and Imre Farkas (Országos Közegésztudományi Intézet, Budapest). *Hydrol. Közlem.* 30, 373-4 (1930).—The drawback of the Winkler method (C.A. 6, 2012) for mass investigations is the relatively high cost of palmitic acid. K stearate is suitable for such detns. The principle of the method is based upon the fact that stearic acid forms with the Ca and Mg ions of the water insol. stearates. The reagent is prepd. as follows: Mix 10 g. stearic acid, 1.0 g. phenolphthalein, 800 ml. MeOH, heat slightly until the solids dissolve, neutralize with 4% KOH in MeOH, dil. to 1 l. with MeOH, and adjust with a 0.05 N BaCl₂ soln. of 0.780 titer no. For this purpose 10 ml. of this BaCl₂ soln. should be dild. with distd. water (which has been boiled) to 100 ml. and titrated with K stearate soln.; a well-adjusted stearate soln. should use 10 ml. for the titration. The actual detn. of total hardness is performed by titrating the 100-ml. water sample used for the detn. of alk. (slightly brown colored, owing to methyl orange used in the detn. of alk.) with K stearate soln. until a pink color appears. The no. of ml. required gives directly the total hardness value in German degrees. The results obtained by using the stearate method were identical with those obtained by the Winkler palmitate method. István Finály

Farkas, I

Transformation of monoarylated and symmetrical di-
arylated urea derivatives. R. Bogusz, I. Farkas, and J.
Békési (E. Kossuth Univ., Debrecen) *Acta Chim. Acad.
Sci. Hung.* 3, 255 (1964) (in German).--Urea derivs. are
changed at m.p. temps. to the corresponding sym. disub-
stituted ureas. Thus, monosubstituted ureas give (aryl
deriv., reaction ($^{\circ}\text{C.}$ above the m.p.), time of fusion
(min.), % starting material recovered, % disubstituted
urea obtained). Ph: 10° , 30, 40.6, 36.4; 20° , 60, 33.3,
46.1; 13° , 120, 25.3, 53.8. *m-H*, $\text{NSO}_2\text{C}_6\text{H}_4$: 10° , 30, 19
54.4; 20° , 60, 0.0, 37.8. *p-H*, $\text{NSO}_2\text{C}_6\text{H}_4$: 10° , 30, 27.8,
59.1; 30° , 60, 0.0, 50.2. *o-Tolyl*: 10° , 60, 29.2, 50. *p-*
Tolyl: 10° , 30, 0.0, 98.7. *p-ClC}_6\text{H}_4: 10° , 30, 0.0, 100.
*m-ClC}_6\text{H}_4: 10° , 60, 20, 44.5. *p-PhC}_6\text{H}_4: 10° , 10, 0.0, 87.
Conversely, sym. diarylureas, heated with 2 molar equivs.
of urea give the monoarylated ureas, thus (diaryl deriv., fusion
temp., time of fusion (min.), % starting material recovered,
% monosubstituted urea obtained): *di-Ph*, 200° (then 170 -
 80°), 30, 18.3, 24.7; *di(m-HNSO}_2\text{C}_6\text{H}_4)*, 190 - 200° , 30,
53.3, 21; *di(p-HNSO}_2\text{C}_6\text{H}_4)*, 200° (then 170 - 80°), 30, 12,
72.4; *di-p-Tolyl*, 190 - 200° , 30, 56.0, 30.6; *di(p-ClC}_6\text{H}_4)*,
 200 - 10° , 30, 50, 19.3; *di(p-OC}_6\text{H}_4\text{NH}_2)*, 210° (then 190 -
 200°), 60, 16.6, 37.7 (*p-OC}_6\text{H}_4\text{NH}_2* is the product) [Pro-
ducts marked (*) m. 15 - 20° lower than expected and are
thought to be related to isourea (Seiberlich and Campbell,
C.A. 47, 2709g)]. Mechanisms are postulated.
R. W. Railford, Jr.***

FARKAS, I.
HUNG :

15. Reactions of phenyl urea and symmetric diphenyl urea derivatives — *Fenilkarbamid és szimmetrikus diphenilkarbamidszűrőanyagok előállításai* — R. Bognár, I. Farkas and I. Békési. (Hungarian Journal of Chemistry — *Magyar Kémiai Folyóirat* — Vol. 59, 1953, No. 10, pp. 289–295, 3 tabs.)

Monosubstituted aromatic urea derivatives are transformed at temperatures near their melting points to symmetric diphenyl urea derivatives. It was found the transformation is facilitated by first class substituents in the para position whereas substituents of the first and second class in the meta position or substituents of the first class in the ortho position were ineffective. Yields in monosubstituted urea derivative are raised by increasing the amount of urea used in the fusion of sulfanilic amide with urea — in the presence of hydrochloric acid — with the simultaneous decrease of the disubstituted product. Symmetrically substituted aromatic urea derivatives and urea fused together yielded the corresponding monosubstituted aromatic urea derivatives. Several monosubstituted aromatic urea derivatives were produced by these reactions differing in their melting points from the compounds known thus far. Possibly these new compounds are the corresponding isomorphous or diastereoisomeric derivatives. The first stage of both reactions is doubtless dissociation and the reaction of the amine and isocyanate formed in the second stage depends on the circumstances of the reaction mixture.

MA-JH

FARKAS, L.

Urea derivatives. I. Preparation and thermal conversion of monoaryl ureas. R. Boguár, L. Farkas, and I. Bekési (L. Kossuth Univ., Debrecen). *Makromol.-Chem.* Sci. **Hg.** 4, 355-68 (1954) (in German) (English summary). —Methods of prepn. of aryl ureas and the changes effected in monoaryl ureas by heat treatment were studied. Melting amine hydrochlorides with urea formed both mono and disubstituted ureas. When the aromatic amine and urea were melted together in the presence of HCl, an increase in the quantity of urea increased the yield of monosubstituted products and decreased the formation of disubstituted derivs., while an increase in temp. leads to greater yields of disubstituted products. Monoaryl ureas were converted into sym. diaryl ureas at temps. near their m.p.s., the rate and degree of conversion depending also on the position and nature of the substituents in the aromatic ring. An explanation of the mechanism of the reaction is presented based on electronic considerations. The results of formation of mono- and disubstituted ureas were as follows (starting amine, mole urea, mole HCl, temp. of the melt (°C.), duration (in min.), % yield monosubstituted urea, % yield disubstituted urea given): PhNH₂ (I), 0.5, 1, 140-50, 60, 2.6, 84.2; I, 1, 1, 140-50, 60, 19.7, 68.8; I, 2, 1, 140-50, 60, 30.0, 62.65; 4-H₂NC₆H₄SO₂NH₂ (II), 0.5, 1, 140-50, 60, 13.0, 61.0; II, 1, 1, 140-50 then 200, 60 then 20, 42.3, 32.4; II, 1, 1, 140-50, 60, 35.6, 25.9; II, 1.2, 1, 140-50, 60, 47.4, 18.9; II, 1.5, 1, 140-50, 60, 66.2, 15.7; II, 2.0, 1, 140-50, 60, 65.1, 10.8; 3-H₂NC₆H₄SO₂NH₂ (III), 1, 1, 140-50 then 150-40, 20 then 40, 20.5, 62.1; III, 1, 1, 160-70, 60, 13.5, 69.2; 4-ClC₆H₄NH₂ (IV), 0.5, 1, 170-80, 60, 84.9; IV, 1, 1, 170-80, 60, 5.97, 45.8; IV, 2, 1, 160-70, 60, 61.6, 6.2; 3-O₂NC₆H₄NH₂, 1.5, 1, 160-70, 120, 16.5; 4-O₂NC₆H₄NH₂ (V), 1.5, 1, 140-50, 60, 84 (recovered

V), —; V, 1.5, 1, 160-70, 120, 62.5 (recovered V), 16.4; V, 1.5, 1, 190-200, 120, 63.0 (recovered V), 16.2. The following prepn. is typical: urea (8.22 g.) (1 mole) in 4.55 ml. (1 mole) concd. HCl treated with 5 g. I, and the soln. heated in an oil-bath to 140-50°; after 10 min. the soln. solidified following strong effervescence. Cooling, extg. with five 25-ml. portions of hot H₂O, and cooling gave 1.22 g. PhNHCONH₂ (VI), m. 147°; remaining undissolved was 3.92 g. PhNHCONHPh (VIa), m. 235°. Similarly were prepd. 3-H₂NO₂SC₆H₄NHCONH₂, m. 180-1°, also 186-3°, and 3-H₂NO₂SC₆H₄NHCONHC₆H₄SO₂NH₂-3', m. 184° (from pyridine). Melting the monoaryl ureas gave the following results [starting compd., temp. of treatment (in °C. above its m.p.), duration (in min.), % yield recovered monoaryl urea, % yield disubstituted urea given]: VI, 10, 30, 40.0, 36.4; VI, 20, 30, 32.4, 41.2; VI, 20, 60, 33.3, 46.1; VI, 13, 120, 25.3, 53.8; 3-H₂NO₂SC₆H₄NHCONH₂ (VII), 10, 30, 19, 54.4; VII, 20, 60, —, 37.3; 4-H₂NO₂SC₆H₄NHCONH₂ (VIII), 10, 30, 27.8, 58.1; VIII, 20, 60, —, 80.2; 2-MeC₆H₄NHCONH₂, 10, 60, 29.2, 50.0; 3-MeC₆H₄NHCONH₂ (IX), 10, 30, 61.0, 31.2; IX, 10, 60, 30.0, 44.6; IX, 10, 120, 27.9, 62.3; 4-MeC₆H₄NHCONH₂ (X), 10, 10, —, 83.3; X, 10, 30, —, 98.7; 3-ClC₆H₄NHCONH₂, 10, 60, 20.0, 44.5; 4-ClC₆H₄NHCONH₂, 10, 30, —, 100.0; 4-BrC₆H₄NHCONH₂, 10-15, 8, —, very good; 4-PhC₆H₄NHCONH₂, about 10, 10, —, 87; 3-O₂NC₆H₄NHCONH₂, 10, 30, 62.6, 39.2. Melting of monoaryl ureas: powd. VI melted, held 50, 60, or 120 min. about 10°, 13°, or 20° above its m.p., the mixt. cooled, repeatedly extd. with H₂O, and the water-insol. VIa recrystd. from EtOAc; the aq. exts. left 24 hrs. in the refrigerator gave recovered VI. II. Conversion of symmetrical diaryl ureas into monoaryl ureas by melting them with urea. R. Boguár and L. Farkas. *Ibid.* 369-81.—Sym.

substituted diaryl ureas (I) when melted with urea were converted into monoaryl ureas (II). The question of polymorphism and isomerism is raised to explain the difference in m.ps. of II with the reported m.ps. The mechanism of the reaction is discussed. The following results were obtained (II, moles urea, temp. of the melt (°C.), % yield II, % yield recovered I given): PhNHCONHPh, 2, 200 then 170-80, 24.7, 18.3; 2-MeC₆H₄NHCONHC₆H₄Me-2' (III), 3, 200-10 then 190-200, 43.53, 10.7; 3-MeC₆H₄NHCONHC₆H₄Me-3', 3, 200 then 140, 47.3, 24.0; 4-MeC₆H₄NHCONHC₆H₄Me-4', 2, 190-200, 30.6, 58.0; 4-ClC₆H₄NHCONHC₆H₄Cl-4', 3, 200-10, 19.3, 50.0; 3-H₂NO₂SC₆H₄NHCONHC₆H₄SO₂NH-3', 2, 190-200, 21.0, 53.3; 4-H₂NO₂SC₆H₄NHCONHC₆H₄SO₂NH-4', 2, 200 then 170-80, 72.4, 12.0; 4-O₂NC₆H₄NHCONHC₆H₄NO₂-4', 2, 210 then 190-200, 37.4 (p-O₂NC₆H₄NH₂), 18.6; 2-O₂NC₆H₄NHCONHC₆H₄NO₂-3', 3, 190-200, 44.4 (m-O₂NC₆H₄NH₂), 9.3. The procedure follows: III (3.0 g.) and 2.25 g. urea melted together 30 min. in an oil-bath, the temp. of the bath held 10 min. at 200-10° then 20 min. at 190-200°, the mixt. cooled, extd. 3 times with 50-ml. portions H₂O, and cooled gave 1.63 g. 2-MeC₆H₄NHCONH₂ (IV), recrystd. thrice from H₂O to give pure IV, m. 178°; the water-insol. material recrystd. from EtOH yielded 0.32 g. III, m. 243°. William Braker

KECSKES, L.; MUSCLER, F.; ZAHORCSHK A.; FARKAS I.; THAN, E.

Quantitative fluoremetric determination of urinary estrogens isolated by naper chromatography. Kiserletes orvostud. 10 no.4:402-404 Aug 58.

1. Pecs1 Orvostudományi Egyetem Szuleszeti es Nagygyaszati Klinikaja.
(ESTROGENS, in urine
quantitative fluorometric determ. of estrogens isolated
by paper chromatography (Hun))

ABSTRACT
 COUNTRY : Hungary G-3
 CATEGORY : Organic Chemistry--Natural compounds and their
 synthetic analogs.
 ABS. JOUR. : RZKhim., No. 16 1959, No. 57207
 AUTHOR : Bognar, R. and Farkas, I.
 INST. : Not given
 TITLE : N-Glucosides. VII. On the Structure of N-tetra-
 acetylglucosylveronal.
 ORIG. PUB. : Magyar Chem Folyoirat, 64, No 9, 326-329 (1958)
 ABSTRACT : The authors have shown that the N-glucoside (I)
 previously prepared from tetraacetylglucosylurea
 and the acid chloride of diethylmalonic acid
 (Helferich and [?] Kosche. Ber. 59, 69 (1926))
 has the structure of N-(2,3,4,6-tetraacetylgluco-
 syl)-veronal. The UV spectra of pure veronal
 and of the product obtained from the saponifica-
 tion of I with a 0.2 M solution of NaOH, recorded
 in Britton-Robinson buffer solution at pH 7.65
 and 6.4 and in abs alcohol, are included. The

CARD: 1/3

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COUNTRY	:	Hungary	G-3
CATEGORY	:	Organic Chemistry--Natural compounds and their synthetic analogs.	
ABS. JOUR.	:	Akchim., No. 16 1959, No.	57207
AUTHOR	:		
INVT.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	<p>curves show that the aglucone of I is identical with veronal. The acid hydrolysis of I (heating for 2 hrs at 120° in a sealed tube of 147.5 mg I with 3 ml conc HCl) likewise yields pure veronal (44%). The sharp contrast between the structure of I and that of the structurally isomeric enol-O-glucoside is proven by the fact that the latter would undergo methanolysis in the cold because of its sensitivity to alkalis, whereas I by contrast is saponified only by hot Na methoxide.</p>	
CARD:		2/3	

COUNTRY : Hungary G-3
 CATEGORY :
 ABST. JOUR. : RZhKhim., No. 16 1959, No. 57207
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : The glucosidic linkage in I is very strong and
 is hydrolyzed only by conc HCl in a sealed tube.
 1 gm of I in 10 ml CH₃OH on the addition of 7 ml
 of a solution of (CH₃O)₂Ba in abs CH₃OH and the
 application of heat (water bath, 30 min) yields
 0.5 gm of the free glucoside, mp 89-90°, [α]_D
 + 8.22° (c = 3; water). For Communication VI
 see RZhKhim, No 1, 1959, 1334.
 S. Rozenfel'd
 CARD: 3/5

154

KECSKES, Lajos; MUTSCHLER, Ferenc; GLOS, Ivan; THAN, Ede; FARKAS, Imre;
CEGLEDI, Jozsef; KOBOR, Jozsef

Indirect paper chromatographic methods for determination of estrogens
in the urino. Kiserl. orvostud. 13 no.5:468-480 0 '61.

1. Pecsí Orvostudományi Egyetem Szülészeti és Nőgyógyászati
Klinikája.

(ESTROGENS urine)

KECSKES, Lajos, dr.; MUTSCHLER, Ferenc, dr.; THAN, Ede, dr.; FARKAS, Imre, dr.

Separation of estrone, 17- β -estradiol and estriol isolated from human ovaries with paper chromatography. Magy. noorv. lap. 26 no.1: 52-57 Ja '63.

1. A Pecszi Orvostudományi Egyetem Szülészeti- és Nőgyógyászati
Klinikájának közleménye (Igazgató: Lajos László dr. egyetemi tanár).
(ESTRIOL) (ESTRADIOL) (ESTRONE) (OVARY) (CHROMATOGRAPHY)
(PREGNANCY, ECTOPIC) (STEIN-LEVENTHAL SYNDROME) (MENSTRUATION DISORDERS)

PARKAS, Imre (Debrecen)

Fans are hopeful in Debrecen. Magy vasut 7 no.2:6 17 Ja '63.

FARKAS, Imre, dr.

Some legal problems of air transportation. Kozleked kozl 20 no.
32:543-545 9 Ag '64.

PARKAS, Imre, dr.

International federation of air transport enterprises. Kozleked
kozl 17 no.52:901-903 D '61.

(Aeronautics, Commercial)

FARKAS, Imre, dr.

General requirements of passenger and freight transportation at
the Hungarian Air Transport Enterprise. Kozleked kozl 18
no.46:828-830 18 N '62.

FARKAS, ISTVAN

HUNGARY/Theoretical Physics - Quantum Electrodynamics.

B

Abs Jour : Ref Zhur - Fizika, No 3, 1959, 17051

Author : Nagy, Karoly; Farkas, Istvan

Inst : -

Title : Electron-Electron Scattering in the Case of Longitudinally-Polarized Electrons

Orig Pub : Magyar fiz. folyoirat, 1958, 6, No 4, 353-367

Abstract : In the first non-vanishing approximation of the ordinary perturbation method, the authors calculate electron-electron scattering in the case of longitudinally-polarized electrons. In the center-of-mass system the cross section is calculated for the case of parallel and antiparallel spins. The possibility of experimental verification are considered. The results of the work coincide with the work previously obtained by Bincer (referat Zhur Fizika, 1958, No 5, 9941). -- V.I. Lend'yel

Card 1/1

21(4)(9)

H/016/60/03/005/012
D0023/D3001

AUTHORS: Farkas, István and Farkas, Mária, née Jahnke

TITLE: The Use of Atomic Energy in the Near Future

PERIODICAL: Fizikai Szemle, 1960, Nr 3, pp 79 - 81

ABSTRACT: The article, based on the material of the Geneva Conference, briefly reviews the present position of nuclear power plants and the expected developments in the near future. V.S. Yemelyanov reported on the atomic energy program of the USSR. The majority of nuclear power plants under design or construction, will use water as moderator and cooling agent. A 400-Mw experimental reactor, in which the generated steam will be led straight into the turbines, will be built in the Ural. A 35-Mw reactor, using a solution or suspension of uranium in heavy water, will be built in the Volga area. A 50-Mw reactor, cooled by liquid sodium, will also be constructed. Fast reactors have also been in operation in the USSR for

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The Use of Atomic Energy in the Near Future

the last four years. The second of these is cooled by mercury, uses plutonium as fuel and has an output of 100 kw. The 5,000-kw fast reactor, which was put into operation in 1958, also uses plutonium and is cooled by sodium. Based on the experience gained with the above reactor, a 50-Mw and a 250-Mw fast reactor will be constructed. Mobile power plants are also being developed, the construction of a 2,000-kw prototype is nearly completed. In the opinion of Soviet scientists, the first thermonuclear reactors will operate with deuterium-tritium, and the later ones with pure deuterium. In Poland, 10% of the electric power output is planned to be supplied by nuclear power plants by 1975. At present, a 2-Mw Soviet reactor is in experimental operation. The second Polish reactor, which will

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D0023/D3001

The Use of Atomic Energy in the Near Future

be gas-cooled and graphite-moderated, will be designed in Poland and will use domestic uranium as fuel. In Rumania, nuclear power plants will supply 10 - 15% of the electric power output by 1975.

ASSOCIATION: Eötvös Loránd Tudományegyetem Elméleti Fizikai Intézet (Loránd Eötvös Academy of Sciences, Theoretical Physics Institute); M.T.A. Műszaki Fizikai Kutató Intézet (Technical Physical Research Institute of the M.T.A.)

Card 3/3

H/016/60/000/012/001/001
B009/B057

AUTHORS: Mrs. Farkas, István; Miss Mészáros, Magda
TITLE: Structure of Real Crystals ²¹ IV. Examination of Dislocations
by X-Ray Diffraction and Electronmicroscopic Methods ¹⁸
PERIODICAL: Fizikai Szemle, 1960, Vol. 10, No. 12, pp. 365-375

TEXT: On the basis of Flügge's textbook (Berlin, 1957) and papers of the authors of the different methods of demonstrating crystal dislocations, the different x-ray diffraction and electronmicroscopic methods are explained and patterns obtained by the researchers are presented. Structures developed by the rearrangement of dislocations (mosaic pattern) are examined with the Laue camera or, if higher resolving power is required, with the Guinier and Tennevin or the Lambot camera. The principle of the Laue pattern is explained by the Bragg equation. For the determination of the dislocation density on the mosaic borders, a formula of J. M. Burgers and the microray technique of Hirsch and coworkers improved by Gay and Kelly is recommended. These methods are suited for the examination of high dislocation densities, for low surface densities the diffraction camera

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Structure of Real Crystals IV. Examination of Dislocations by X-Ray Diffraction and Electronmicroscopic Methods H/016/60/000/012/001/001
B009/B057

of Berg and Barrett, for imperfections in the interior of crystals the camera of A. R. Lang is used. The last named has been developed for the rapid examination of larger crystal regions. The electronmicroscopic methods are also based on the Bragg equation. Sufficiently thin films are necessary for transillumination. The diffraction contrast technique, first applied by Hirsch and coworkers and developed by G. A. Basset, J. W. Menter, D. W. Pashley and H. G. F. Wilsdorf, is extensively being used for the examination of different kinds of dislocations in thin metal films and of the development and displacement of dislocations. The periodic structure of crystals may be directly demonstrated by the lattice resolution methods in which - contrary to the diffraction contrast method - rays reflected from the atomic planes also take part in forming the picture. In the direct resolution pattern the atomic plane itself is reproduced. Atomic planes of very small interplanar spacing can be resolved indirectly over moiré diagrams first investigated by W.C.T. Dowell and coworkers. These are also suited for the recording of displacements produced by electronic bombardment. With regard to the lattice resolution method, the authors refer to Proceedings of the International Conferences

Card 2/3

Structure of Real Crystals IV. Examination of H/016/60/000/012/001/001
Dislocations by X-Ray Diffraction and B009/B057
Electronmicroscopic Methods

on Electronmicroscopy of London (1954), of Berlin (1959) and of the
Regional Conference of Tokyo (1956). No research conducted at the Research
Institute of Applied Physics is mentioned in the paper. There are 27
figures and 31 non-Soviet references.

ASSOCIATION: Műszaki Fizikai Kutató Intézet (Research Institute of
Applied Physics)

Card 3/3

ALMASI, M.; SZABO, L.; FARKAS, I.; BOTA, T.

Reactions of metallic carbonyls. Note II. On the kinetics of the reactions of dicobalt-octocarbonyl with some derivatives of acetylene. (EEAI 10:9)
Studii cerc chim 8 no.3:495-508 '60.

1. Laboratorul de chimie organica al Universitatii "Babeş Bolyai", Cluj.

(Carbonyl compounds) (Metals) (Cobalt carbonyls)
(Acetylene)

VASH, K.[Vas, K.]; PARKASH, I.[Farkas, I.]

Some immediate influences of ionizing radiations on the yeast
cell. Mikrobiologiya 30 no.3:436-440 My-Je '61. (MIRA 15:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut pishchevoy
promyshlennosti, Budapesht, Vengriya.

(YEAST) (RADIATION--PHYSIOLOGICAL EFFECT)

FARKAS, Istvan

Immediate perspectives of utilizing atomic energy. Fis szemle 10
no.3:79-81 Mr '60.

1. Eotvos Lorand Tudományegyetem Elméleti Fizikai Intézete, Budapest
(for Istvan Farkas). 2. Magyar Tudományos Akadémia Muszaki Fizikai
Kutató Intézete (for Farkasné Jahnke).

BOGNAR, Rezső, prof., dr. (Debrecen, Kozponti Egyetem, Magyarország);
FARKAS, Istvan (Debrecen, Kozponti Egyetem, Magyarország)

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(INTESTINE SMALL physiol)
(CARDIOVASCULAR SYSTEM physiol)